IN THE TITLE:

Please replace the title as follows:

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– TILT FOCUS MECHANISM FOR AN OPTICAL DRIVE–

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IN THE SPECIFICATION:

Please amend the paragraph beginning on page 1, line 1 as follows:

A3

The present application is a continuation in part of U.S. Patent Application Serial No. 09/557,284, filed April 24,2000, entitled "Tilt Focus Method and Mechanism For an Optical Drive," which is related to U.S. Patent Application Serial No. 09/315,398, filed May 20, 1999, entitled "Removable Optical Storage Device and System," now abandoned, U.S. Provisional Application Serial No. 60/140,633, filed June 23, 1999, entitled "Combination Mastered and Writeable Medium and Use in Electronic Book Internet Appliance," U.S. Patent Application Serial No. 09/393,899, filed September 10, 1999, entitled "Content Distribution Method and Apparatus," U.S. Patent Application Serial No. 09/393,150, filed September 10, 1999, entitled "Writeable Medium Access Control Using a Medium Writeable Area," now United States Patent No. 6,631,359, U.S. Patent Application Serial No. 09/548,128, filed April 12, 2000, entitled "Low Profile and Medium Protecting Cartridge Assembly," U.S. Patent Application Serial No. 09/560,781, entitled "Miniature Optical Disk for Data Storage," now abandoned, U.S. Patent Application Serial No. 09/540,657, filed March 31, 2000, entitled "Low Profile Optical Head," U.S. Application Serial No. 09/457,104, filed December 7, 1999, entitled "Low Profile Optical Head," and U.S. Application Serial No. 09/815,293, filed March 21, 2001, entitled "Disk Drive Actuator and Method of Making Same" ~~(Serial Number not yet assigned, Attorney Docket No. 4154-13) filed simultaneously herewith~~ now United States Patent No. 6,632,310, all of which are incorporated herein by reference in their entireties.

Please amend the paragraph beginning on page 30, line 3 as follows:

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The optimal arm geometry is defined by optimization of the stiffness to weight ratio as further constrained by space available within the disk drive. Torsional and bending stiffness are critical to minimization of arm deflections which would otherwise degrade the accuracy of the servo-mechanical positioning system. In order to optimize stiffness and minimize mass simultaneously, materials for the construction of the arm are selected to maximize the stiffness to weight ratio. Composite fiber material, made of epoxy resin and fibers in a composite matrix are well suited to optimize the stiffness to weight ratio. Typical fiber

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materials are selected from the group comprising carbon, magnesium, boron, beryllium, ~~Kevlar~~ KEVLAR composite fiber material, glass and ceramic. Composite fiber materials of this type can be made in sheet form, where the fiber orientation within the sheet is unidirectional. The bending stiffness of such a sheet composite fiber material is greater in one direction than the other. The stiffness is low in the direction parallel to the fibers and is very high in the direction perpendicular to the fibers. In order to optimize stiffness while minimizing mass, material is intentionally left out, creating voids, where the material's contribution to stiffness was not substantial compared to its weight contribution. The effect of the voids is to interrupt fibers that would have been continuous were it not for the void. In an arm comprised of a single unidirectional fiber matrix, interruption of the fiber contributes a detrimental effect to the stiffness of the structure. The optimization therefore requires creation of structural planar elements comprising beam portions. The beam portions in the arm are directionally oriented specifically to create high bending and torsional stiffness, incorporating voids for mass reduction, utilizing fiber composite materials wherein multiple layers of the composite are comprised of fibers that are aligned with the principal axes of the various beam portions. This permits the use of long uninterrupted fibers which contribute optimal stiffness to the respective beam portions with reduced or minimal mass.

Please amend the paragraph beginning on page 31, line 5 as follows:

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Figs. 37-39 provide additional views of the actuator arm 410, with the optical pickup unit, voice coil motor assemblies and bearing cartridge removed. The forward and rearward portions 412, 414 of the actuator arm 410 of the preferred embodiment are each comprised of an upper planar element 436 and a lower planar element 438 with a flexure member 440 and spacer member 442, comprising a third planar element 444, disposed between the upper and lower planar elements. In the preferred embodiment, as partially illustrated in Fig. 40 ~~Fig. 440~~, both the upper and lower planar elements 436, 438 comprise eight separate layers or plies of carbon fiber material L_1-L8 made from composite planar element panels 458, although the number of layers or plies comprising the overall laminate structures which are the planar elements 436, 438 may be more or less, provided symmetry about the neutral axis of the planar element is generally maintained. In particular, each carbon fiber layer L_1-L_8 of the planar elements 436, 438 has a distinct geometry and purpose such that the resulting carbon fiber planar element can take advantage of the separate benefits of the individual

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layers. In this regard, the fibers within each layer are oriented to optimize the purpose of the layer and each layer can form a uniaxial fiber matrix. For example, fibers are oriented parallel to the orientation of beam elements to provide desired stiffness and the fibers of different layers cross at high enough angles with respect to the other individual layers to provide an overall laminate structure which is stiff in some directions and flexible in others. Generally, the fibers are parallel to each other within each carbon fiber layer L_1-L_8, but the orientation of the fibers from layer to layer in an overall planar element of the actuator assembly may vary.

Please amend the paragraph beginning on page 39, line 16 as follows:

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With respect to the sixth embodiment, it will be apparent that other modifications, alterations and variations may be made by or will occur to those skilled in the art to which this invention pertains, particularly upon consideration of the foregoing teachings. For example, the number of layers or plies within the fiber planar elements may vary as may the relative orientation of the fibers within each layer. In addition, while carbon fiber composite material performs well in this application, other materials such as glass, magnesium, boron, beryllium, ~~Kevlar~~ KEVLAR composite fiber material and ceramics, alone or in various combinations may also perform satisfactorily. It is also contemplated that the component shapes may be cut from individual layers of material, which layers are subsequently laminated to form a composite panel, or that the component shapes are cut from the composite panel. It is still further contemplated that the individual layers comprising a planar element may have varying shapes and sized relative to each other. The objective is to achieve a lightweight, but a strong and stiff actuator assembly.

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